



SHEAR CONNECTORS FIELD SECTION 1037

1037.1 SCOPE. To establish procedures for the inspection of stud-type shear connectors.

1037.2 APPARATUS. Micrometer or vernier caliper capable of measuring to 0.0001 in. [0.00254 mm] and accurate to within at least 0.001 in. [0.0254 mm].

1037.3 PROCEDURE.

1037.3.1 General. Inspection of shear connectors is normally performed by personnel from the Bridge Division. However, in some cases, these materials may be shipped directly to the project. If this occurs, the Resident Engineer may request the Materials Division to perform the inspection of the shear connectors.

1037.3.2 Certifications. The contractor is required to furnish manufacturer's certification containing the following information;

- (a) The name of the manufacturer.
- (b) Certification that the studs meet the requirements of Specification Sec 1037.2.
- (c) The size (length and diameter) of the studs.
- (d) A certification from the manufacturer that the studs delivered are qualified in accordance with Specification Sec 1037.8.
- (e) A copy of the qualification test results as certified by the testing laboratory, unless the source and manufacturing process for these studs have been previously approved.
- (f) Certified copies of in-plant quality control test results.

These certifications shall be carefully checked by the inspector to insure compliance with contract requirements. The manufacturers listed in [Field Section FS-1037 Table 1](#) of this manual have on file in the Bridge Division satisfactory certified test results and may be considered as being previously approved sources with approved manufacturing processes.

If studs from any other manufacturer are offered for inspection, the Bridge Division shall be consulted.

1037.3.3 Inspection. The studs shall be spot checked to insure that they are of uniform quality and condition; and free from laps, fins, seams, cracks, twists, bends, or other injurious defects. The finish shall be as produced by cold drawing, cold rolling, or machining. The size of studs with allowable tolerance shall be as shown in Table 1, Specification Sec 1037.5.2. It should be noted that the overall height mentioned in Table 1 should be measured after welding.



1037.3.4 Report. Stud-type shear connectors shall be reported on Form B-708R2. The form shall show all pertinent information regarding the material and a copy of the certifications shall be attached to all copies of the report. The report is to indicate acceptance, qualified acceptance, or rejection. Appropriate remarks, as described in [General Sec 7.1.2](#) of this Manual, are to be included in the report to clarify conditions of acceptance or rejection. Distribution of the report is to be as follows:

Division Engineer, Bridge
Division Engineer, Materials
Operations Engineer;
Resident Engineer

